

WHAT IS CLAIMED IS:

1 1. An electrophoretic display, comprising: a gate line that runs in a first direction;
2 a data line that runs in a second direction; and
3 a pixel electrode formed on an area where the gate line intersects the data line,
4 wherein a portion of the pixel electrode overlaps a portion of the gate line.

1 2. An electrophoretic display of claim 1,
2 wherein a portion of the pixel electrode overlaps a portion of the data line.

1 3. An electrophoretic display of claim 1, further comprising:
2 an insulating layer interposed between the data line and the pixel electrode,
3 wherein the insulating layer has a dielectric constant lower than 4.

1 4. An electrophoretic display of claim 1,
2 wherein the data line is made of metal such as Mo, Mo alloy, Cr, Ta and Ti.

1 5. An electrophoretic display of claim 1, further comprising:
2 a thin film transistor having a channel; and
3 a source electrode;
4 a drain electrode;
5 wherein the pixel electrode is made of opaque material, and
6 wherein the pixel electrode overlaps the channel of the thin film transistor.

1 6. An electrophoretic display of claim 3,
2 wherein the insulating layer is made of a-Si:C:O or a-Si:O:F.

1 7. An electrophoretic display, comprising;
2 a gate electrode;
3 a source electrode;
4 a drain electrode a semiconductor layer; and
5 an opaque layer,
6 wherein the opaque layer lies opposite to the gate electrode with the semiconductor layer
7 disposed therebetween.

1 8. An electrophoretic display of claim 7, further comprising:
2 a data line; and
3 a gate line,
4 wherein the inclination angle of the gate line or the data line relative to the surface of the
5 substrate ranges between about 20 degrees to about 80 degrees.

1 9. An electrophoretic display of claim 7, further comprising:
2 an insulating layer formed between the data line and the pixel electrode,
3 wherein the insulating layer has a dielectric constant smaller than 4.

1 10. An electrophoretic display of claim 7,
2 wherein the data line is made of metal such as Mo, Mo alloy, Cr, Ta and Ti.

1 11. An electrophoretic display of claim 7, further comprising:
2 a thin film transistor with a channel;
3 wherein the pixel electrode is made of opaque material, and
4 wherein the pixel electrode overlaps the channel of the thin film transistor.

1 12. An electrophoretic display of claim 9,
2 wherein the insulating layer is made of a-Si:C:O or a-Si:O:F.

1 13. An electrophoretic display of claim 7, further comprising:
2 a pixel electrode;
3 a data line; and
4 a gate line,
5 wherein the pixel electrode overlaps the data line and the gate line.

1 14. An electrophoretic display, comprising;
2 a substrate; and
3 a thin film transistor that comprises
4 a source electrode and a drain electrode formed on the substrate;
5 a semiconductor layer formed on the source and the drain electrode;
6 an insulation layer formed on the semiconductor layer; and
7 a gate electrode formed on the insulation layer.

1 15. An electrophoretic display of claim 14, further comprising:
2 a gate line;
3 a data line; and
4 a pixel electrode,
5 wherein a portion of the pixel electrode overlaps a portion of the gate line, and
6 wherein a portion of the pixel electrode overlaps a portion of the data line.

1 16. An electrophoretic display of claim 15,
2 wherein an insulating layer is between the data line and the pixel electrode, and
3 wherein the insulating layer has a dielectric constant smaller than 4.

1 17. An electrophoretic display of claim 15,
2 wherein the data line is made of metal such as Mo, Mo alloy, Cr, Ta and Ti.

1 18. An electrophoretic display of claim 15,
2 wherein the inclination angle of the gate line or the data line relative to the surface of the
3 substrate ranges between about 20 degree to 80 degree.

1 19. An electrophoretic display of claim 16,
2 wherein the insulating layer is made of a-Si:C:O or a-Si:O:F.

1 20. An electrophoretic display, comprising;
2 a gate line;

3 a data line;
4 a pixel electrode;
5 a common electrode; and
6 a plurality of micro-capsules,
7 wherein each of the microcapsules includes electric ink containing a plurality of color
8 pigment particles,
9 wherein the plurality of color pigment particles are at least one of red, green, blue, cyan,
10 yellow, magenta, black and white, and
11 wherein a portion of the pixel electrode overlaps a portion of the gate line.

1 21. An electrophoretic display of claim 20,
2 wherein a portion of the pixel electrode overlaps a portion of the data line.

1 22. An electrophoretic display of claim 20, further comprising:
2 an insulating layer formed between the data line and the pixel electrode,
3 wherein the insulating layer has a dielectric constant smaller than 4.